

REMARKS

Claims 1-22 are currently pending.

In the Requirement for Restriction, the Examiner requested election of one of the following groups:

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| Group I. | Claims 1 and 2, drawn to nucleic acids encoding amino acids 11-140 of SEQ ID NO: 1. |
| Group II. | Claims 3 and 4, drawn to nucleic acids encoding 16-50 amino acids of SEQ ID NO: 5. |
| Group III. | Claims 5 and 6, drawn to nucleic acids encoding 16-50 amino acids of SEQ ID NO: 3. |
| Group IV. | Claims 7 and 8, drawn to polypeptides containing amino acids 11-140 of SEQ ID NO: 1. |
| Group V. | Claims 9 and 10, drawn to polypeptides containing 16-50 amino acids of SEQ ID NO: 5. |
| Group VI. | Claims 11 and 12, drawn to polypeptides containing 16-50 amino acids of SEQ ID NO: 3. |
| Group VII. | Claim 13, drawn to methods for identifying stabilizing compounds by rational drug design using data from Tables 1-5. |
| Group VIII. | Claim 14, drawn to methods for identifying destabilizing compounds by rational drug design using data from Tables 1-5. |
| Group IX. | Claim 15, drawn to methods for identifying inhibitory compounds by rational drug design using data from Tables 1-5. |
| Group X. | Claim 16, drawn to methods for identifying SNT/FGFR stabilizing compounds using data for amino acids 11-140 of SEQ ID NO: 1 and SEQ ID NO: 3 by rational drug design. |
| Group XI. | Claim 17, drawn to methods for identifying SNT/FGFR destabilizing compounds using data for amino acids 11-140 of SEQ ID NO: 1 and SEQ ID NO: 3 by rational drug design. |
| Group XII. | Claim 18, drawn to methods for identifying compounds that inhibit formation of a SNT/FGFR complex using data for amino acids 11-140 of SEQ ID NO: 1 and SEQ ID NO: 3 by rational drug design. |

- Group XIII. Claim 19, drawn to methods for identifying compounds that potentially inhibit the SNT/FGFR dependent cellular signaling pathway using data from Tables 1-5.
- Group XIV. Claim 20, drawn to methods for identifying compounds that potentially stimulate the SNT/FGFR dependent cellular signaling pathway using data from Tables 1-5.
- Group XV. Claim 21, drawn to methods for identifying compounds that bind to the PTB domain of SNT1 or the SNT.FGFR complex using data from Tables 1-5.
- Group XVI. Claim 22, drawn to a computer representation of SNT/FGFR complex using data from Tables 1-5.

Responsive to the Requirement for Restriction, Applicants elect to prosecute the invention of Group XII, claim 18, drawn to methods for identifying compounds that inhibit formation of a SNT/FGFR complex using data for amino acids 11-140 of SEQ ID NO: 1 and SEQ ID NO: 3 by rational drug design, with traverse.

Applicants respectfully request reconsideration of the Requirement for Restriction, for the reasons provided as follows.

Under 35 U.S.C. §121 "two or more independent and distinct inventions ... in one Application may ... be restricted to one of the inventions." Inventions are "'independent'" if "there is no disclosed relationship between the two or more subjects disclosed" (MPEP 802.01). The term "'distinct'" means that "two or more subjects as disclosed are related ... but are capable of separate manufacture, use or sale as claimed, AND ARE PATENTABLE OVER EACH OTHER" (MPEP 802.01) (emphasis in original). However, even with patentably distinct inventions, restriction is not required unless one of the following reasons appear (MPEP 808.02):

1. Separate classification
2. Separate status in the art; or
3. Different field of search.

Further, under Patent Office Examining Procedures, "[i]f the Search and Examination of an entire Application can be made without serious burden, the Examiner

must examine it on the merits, even though it includes claims to distinct or independent inventions" (MPEP 803, Rev. 8, May 1988) (emphasis added).

Applicants respectfully submit that the groups designated by the Examiner fail to define compositions and methods, with properties so distinct as to warrant separate Examination and Search. Claim 18, of elected Group XII, which relates to methods for identifying compounds that inhibit formation of a SNT/FGFR complex using data for amino acids 11-140 of SEQ ID NO: 1 and SEQ ID NO: 3 by rational drug design are fundamentally related to claims 7 and 8 of Group IV, drawn to polypeptides containing amino acids 11-140 of SEQ ID NO: 1, and to claims 11 and 12 of Group VI, drawn to polypeptides containing 16-50 amino acids of SEQ ID NO: 3. In particular, the method of claim 18 relies on the sequence data contained in the claims of Groups IV and VI, that is, the amino acid sequences of SEQ ID NOS: 1 and 3. Thus, a search on the method of claim 18 would involve a search for the subject matter of the claims of Groups IV and VI, that is, the amino acid sequences of SEQ ID NOS: 1 and 3.

Furthermore, Applicants assert that claim 15 of Group IX, claim 19 of Group XIII and claim 21 of Group XV are also related to elected claim 18 of Group XII for the following reasons:

The method of claim 18 of elected Group XII discloses a method of identifying a compound that inhibits the formation of a SNT/FGFR complex using the three dimensional structure of the complex by obtaining the atomic coordinates that define the three dimensional structure of the SNT/FGFR complex which consists of amino acid residues 11-140 of SEQ ID NO: 1 and a fragment of FGFR consisting of SEQ ID NO: 3. Thus, the atomic coordinates of Tables 1-5 are closely related to the method of claim 18. For this reason, a search of the method of claim 18, that is for use of the three dimensional structure of the complex by obtaining the atomic coordinates would result in a search of the subject matter of claim 15 of Group IX, drawn to methods for identifying inhibitory compounds by rational drug design using data from Tables 1-5.

Likewise, claim 19 of Group XIII is related to elected claim 18 of Group XII, by virtue of the fact that a method of identifying a compound that inhibits formation of a SNT/FGFR complex by way of the sequences that define the complex and the corresponding atomic coordinates, would also result in the same compound inhibiting the

SNT/FGFR cellular signaling pathway. Thus, a search on the method of claim 18 would in all likelihood result in a search of the subject matter of claim 19.

Furthermore, Applicants assert that claim 21 of Group XV is related to elected claim 18 of Group XII for the following reasons. The method of claim 18 includes use of the three dimensional structure of the SNT/FGFR complex comprising obtaining the atomic coordinates that define the three dimensional structure of the SNT/FGFR complex consisting of a fragment of SNT consisting of amino acid residues 11-140 of SEQ ID NO: 1 and a fragment of FGFR consisting of SEQ ID NO: 3, followed by selecting a potential compound that binds to the PTB domain of SNT. Applicants respectfully assert that a search on the methods of identifying a compound that binds to the PTB domain of the SNT1 or the SNT/FGFR complex of claim 21 in Group XV, would result in a search of related, if not identical, subject matter as in claim 18 of elected Group XII.

Applicants assert that the search for any of the methods separately classified by the Examiner as the invention of elected Group XII would require an additional search of the classes wherein the claims of Groups IV (claims 7 and 8), VI (claims 11 and 12), IX (claim 15), XIII (claim 19) and XV (claim 21) are classified, thus resulting in a duplicate search for the same material.

The Examiner's assertions to the contrary notwithstanding, Applicants respectfully submit that conjoint examination and inclusion of all of the claims of the present Application would not present an undue burden on the Examiner, and accordingly, withdrawal of the Requirement for Restriction is in order.

Alternatively, Applicants respectfully submit that a search and examination on the merits of at least Groups IV, VI, IX, XIII and Group XV claims together with claim 18 of elected Group XII can be made without serious burden. Furthermore, Applicants believe that conjoint examination and inclusion of the 8 claims of these groups is in order, particularly in light of the related subject matter, as noted above. Thus, conjoint examination and inclusion of the claims of elected Group XII with Groups IV, VI, IX, XIII and XV of the present Application is respectfully requested.

Fees

No fees are believed to be necessitated by the instant response. However, if this is incorrect and if additional fees are necessitated by the foregoing Response, authorization

is hereby given to charge Deposit Account No. 11-1153 for any underpayment, or credit any overages.

Conclusions

In view of the above, withdrawal of the Requirement for the Restriction is requested, and an early action on the merits of the claims is courteously solicited.

Respectfully submitted,



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